



Operating Manual G1 Facepiece



Order No.: D2058000/04

MSA**safety**.com



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1 Safety Regulations

1.1 Correct Use

G1 Facepieces - hereafter called masks -are full face masks with a positive pressure connection. They are not complete respiratory protective devices by themselves, but serve as facepieces [EN 136 CL3+] for use with compressed air breathing apparatus of the G1 series and respiratory filters.

The mask as part of a respiratory protective device ensures an appropriately tight fit of the user's face against the ambient atmosphere.

When using a compressed air breathing apparatus, the operating manual for the compressed air breathing apparatus must be read and observed.

If the mask is used as part of a filtering device using the filter adapter, respiratory protective filters equipped with a standardized thread according to EN 148-1 must be used. The type and concentration of contaminants and the oxygen concentration in the ambient air must be known to decide if the use of a filtering device is permissible. The instructions for use of the respiratory filters have to be regarded, including any information regarding the use in potentially explosive atmospheres. When in doubt use a supplied air breathing apparatus. The permitted minimum oxygen concentration of ambient air depends on national regulations.

When used in oxygen or an enriched-oxygen atmosphere, the increased potential hazard of flammability has to be regarded.

WARNING!

According to the European directive 89/656/EC it has to be verified before first use of the mask that a correct size has been chosen (proper tight fit), that the mask can be worn in combination with other protective equipment (for example a protective jacket), that it is a correct choice for the conditions at the particular place of use and that it fulfils the ergonomic requirements.

WARNING!

Read this manual carefully before using the device. The device will perform as designed only if it is used and maintained in accordance with the manufacturer's instructions. Otherwise, it could fail to perform as designed and persons who rely on this device for their safety could sustain serious personal injury or death.

Before use the product operability must be verified. The product must not be used if the function test is unsuccessful, it is damaged, a competent servicing/maintenance has not been made, genuine MSA spare parts have not been used.

1.2 Liability Information

MSA accepts no liability in cases where the product has been used inappropriately or not as intended. The selection and use of the product are the exclusive responsibility of the individual operator.

Product liability claims, warranties also as guarantees made by MSA with respect to the product are voided if it is not used, serviced, or maintained in accordance with the instructions in this manual.

Changes and modifications not expressly approved by the manufacturer will void the user's authority to operate the equipment.

1.3 Safety and Precautionary Measures

- The device may be used in explosive atmospheres according to the class stated in the ATEX certification, see chapter 2.5.
- The ATEX class of any other equipment used together with this device has to be regarded as well. The lowest class sets the limit.
- If the device is used in an explosive atmosphere, dissipative clothes and footwear must be used in conjunction with dissipative grounds. When used in explosive atmospheres there must be direct contact between the head harness and the head. Do not use head coverings (e.g.fire hoods) under the head harness.
- If the device is used in an explosive atmosphere, the neck strap has to be correctly attached to the mask with carabiner hooks, see chapter 2.5. (The rubber neck strap has to be attached to the metal rings of the harness, the textile neck strap has to be attached to the lens ring with carabiner hooks.)
- Use and storage of the mask with Kevlar (textile) harness in a vincinity that generates strong electrostatic charges in explosive atmospheres is not allowed.

2 Description

The inhalation air flows from the component housing of the mask past the inhalation valve to the inside of the lens (thus keeping the lens fog-free) and then through the inlet valves into the nosecup.

The exhalation air passes through the exhalation valve directly to the ambient air.

Fixed Push-to-Connect component housing only: If in a safe atmosphere no demand valve is attached, ambient air can be inhaled directly through an open port to facilitate breathing and speaking with no resistance.

The faceblank is made of a special soft rubber compound and assures a snug, comfortable fit and a tight seal. The mask and the nosecup are available in 3 sizes (small, medium, large).

The mask is available with different head harnesses and different component housings.



7 Lens

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2.1 **Mask Versions** Harness Versions

The mask is available with different head harnesses; Kevlar (textile) 4-point or rubber (5-point). The rubber head straps are numbered to indicate the correct tightening sequence.











Component Housing Versions

The mask is available with different component housings:



Fig. 4 Fixed Push-To-Connect





Fig. 5 Push-To-Connect



Fig. 7 ESA

2.2 G1 Heads-Up Display (HUD)

When the mask version with the G1 fixed Push-to-Connect component housing is used in connection with a G1 SCBA, the light pipes on the mask are part of the HUD. The HUD is integrated into the demand valve and projects light into the mask.

The HUD provides the pressure and alarm status to the user through light pipes into the mask. The pressure status is on the right side of the user, while the alarm status is on the left side of the user.

For details about the HUD, see G1 SCBA operating manual.

2.3 Filter Adapter

Using the filter adapter with the G1 fixed Push-to-Connect component housing, protective filters equipped with a standardized thread according to EN 148-1 can be attached to the mask. The instructions for use of the respiratory filters have to be regarded, including any information regarding the use in potentially explosive atmospheres.

2.4 Marking

The mask is marked on the outer faceblank as shown in Fig. 8:



Fig. 8 Marking of mask body

- 1 Manufacturing location code
- 2 Serial number
- 3 For applicable ATEX classification, see operating manual.
- 4 EN standard, class
- 5 CE-marking with notified body number (DEKRA EXAM, Zertifizierungsstelle Dinnendahlstr. 9, 44809 Bochum)
- 6 Part number/ATO code

2.5 Certification

The masks comply with the following directives, standards or standardized documents:



The Declaration of Conformity can be found under the following link: https://MSAsafety.com/DoC

Atex Categories

	G1 Facepiece	
Harness	Rubber Kevlar (Textile)	I M1 II 1G IIC II 1D
Faceblank		M1 1G C 1D
	Rubber	M1 1G C 1D
Neck strap	Textile	I M1 II 1G IIB II 2G IIC II 1D
Filter Adapter	for Fixed Push-to-Connect	M1 1G C 1D
Connector pieces	Push-To-Connect M45x3 ESA	M1 1G C 1D
	Standard Lens	M1 1G C 1D
Lens	Anti-fog lens	I M1 II 1G IIA II 2G IIB II 1D
	Anti-scratch lens	I M1 II 1G IIB II 2G IIC II 1D

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Example:

ATO: A-M/I-M-E-R-P

A= Anti-fog lens

M/I= Faceblank: Medium

M= Nosecup: Medium

E= Head Harness: Rubber

R= Neck strap: Rubber

P= Regulator: Push to Connect

Atex Category:

I M1

II 1G IIA

II 2G IIB

ll 1D

3

Use

The mask is carried using the neck strap in front of the chest. To ensure protection from dirt and debris, ensure the mask opening is towards the user's body.



When used in explosive atmospheres there must be direct contact between the head harness and the head. Do not use head coverings (e.g.fire hoods) under the head harness.

Ensure that the top of the mask seal **only** lies on the user's forehead. Hair or spectacle side arms should not be between the mask's seal and the user's skin.

The mask could otherwise leak. This danger also exists for instance for mask wearers with beards or deep scars in the sealing area.



In order to guarantee a proper fit for those wearing glasses, the G1 Facepiece spectacle kit **must** be worn since ordinary glasses **cannot** be worn under the mask.

3.1 Donning



) Spread the harness with both hands.

(2) Position the chin into the chin cup.

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- Pull the head straps over your head.
 - a) Ensure that the harness is sitting correctly and is not twisted.



- Adjust mask and tighten the straps firmly and evenly.
 - a) Tighten the lower straps first by pulling them straight back, not out.
 - b) Tighten the temple straps in the same manner.
 - c) If present, tighten the top strap for best visibility and fit.

3.2 Leak Check

In order to check the mask-to-face tightness a leak test must be performed before each use.



Seal the inlet (component housing) with the palm of your hand or by attaching the non-pressurized regulator.



- 2) Check tightness.
- Inhale and hold breath for a few seconds. The mask must stay collapsed on face.
-) Exhale.

The exhalation valve should open and release the pressure inside the mask.

- If necessary retighten the straps.
- a) If the leak check fails, re-don the mask. If the leak check still fails, the mask must not be used.

3.3 Removing the Mask



(1) Loosen the head harness by pulling the buckles forward using your fingers.



- (2) Grip the chin straps and pull the head harness forward over the head.
- (3) Grip the front of the mask (as shown) and pull the mask away and down from the user.

4 Spectacle Kit

Before using a spectacle kit, an optometrist must examine the spectacle kit and prescribe the correct lenses to fit into the lens frame on the spectacle kit.

Failure to obey this warning can result in serious injury or death.



(1) Flip the head harness over the front of the mask so the harness is covering the lens of the mask.

This will open up the faceblank to make it easier to install the spectacle kit.

(2)

Squeeze in on the wire frame of the spectacle kit at the large bends about 5 cm from the ends. Do not overbend the wire.

- (3) Push the top part of the frame into the lens. The faceblank has three rubber tabs to grab the frame.
 - a) Place the frame in the middle of the lens with the smaller tabs grabbing the wire frame.



- (4) Take one end of the wire frame and push it up into the mask so it follows the edge where the lens and the faceblank meet.
 - a) The end of the wire frame must be positioned into small pockets in the faceblank on the edge of the lens.

(5) Repeat step (4) on the opposite side.

(6) The frame for the spectacles can be adjusted up/down and in/out depending on the facial features. Don the mask and adjust to optimize visibility.

5 Cleaning, Disinfection

The cleaning and disinfection of the masks is performed in accordance with the cleaning intervals \rightarrow chapter 6.2.



Follow the washing agent's user instructions on this CD/DVD.



The power supply for the HUD (if applicable) is not part of the G1 Facepiece and is therefore not damaged during cleaning.



Do not use cleaning products containing hydrocarbons or solvents [e.g. nitro-thinner]. Cleaned parts must not be dried in radiant heat [sun, radiators]. When using a drying cabinet, the temperature must not exceed +60°C.

Perform a tightness test (chapter 6.5) after every cleaning, disinfection and maintenance or after every exchange of parts.

5.1 Preparing the Mask for Cleaning or Disinfection

- (1) Remove inhalation and exhalation valve discs.
- (2) Unbutton the nosecup.
- (3) Removed components must be separately cleaned and disinfected.
- (4) Dry mask and components and reassemble mask in reverse order.
- (5) Perform a tightness test [\rightarrow chapter 6.5].

5.2 Suitable Cleaning and Disinfection Procedures

WARNING!

Depending on lens type, only certain cleaning and disinfection procedures are permitted. Only use the procedures permitted for the lens type, other procedures will damage the lens.

Procedure	Part number washing instruc- tion	Mask with Standard Lens (Marking P)	Mask with Anti-Fog Lens (Marking A)	Mask with Anti-Scratch- Lens (Marking H)
Cleaning/Disinfec- tion by hand	10127480	x	x	x
Cleaning/Disinfec- tion washing machine (tumbling type)	10127346	x		x

Lens Identification



Fig. 9 Marking

- 1 Marking placement
- 2 Mask with Standard Lens (Marking P)
- 3 Mask with Anti-Fog Lens (Marking A)
- 4 Mask with Anti-Scratch Lens (Marking H)

6 Maintenance

6.1 Maintenance Instructions

This product should be regularly checked and serviced by trained specialists. Inspection and service records must be maintained. Always use original parts from MSA.

Repairs and maintenance must be carried out only by authorized service centres or by MSA. Changes to devices or components are not permitted and will result in loss of approval.

MSA is liable only for maintenance and repairs carried out by MSA.

MSA recommends the following maintenance intervals. If necessary considering the usage, tasks may be at even shorter intervals than indicated.

Observe national laws and regulations!

If in any doubt, ask your local MSA contact person.

6.2 Maintenance Intervals

Work to be	Maximal Inter	vals				
Performed	Before use	After Use	6-monthly	Two years	Four years	Six years
Cleaning and Disinfection ^{*)}		x	$\mathbf{X}^{*)}$	X *)		
Visual, Functional and Tightness Check ^{**)}		x	X **)			
Replacement of the exhalation valve disc					x	
Replacement of the Speech Diaphragm						x
Replacement of the O-ring for component housing				x		
User check	Х					

^{*)} For a 2-year interval cleaned and disinfected masks have to be stored airtight. Otherwise masks should be cleaned and disinfected at least semi-annually. After each cleaning and disinfection the mask must be checked.

^{**')} For airtightly packed face pieces, which are not exposed to increased climatic and mechanical stress [for example transport on vehicles], this interval can be extended to 2 years.

6.3 Maintenance of the Exhalation Valve

The year of manufacture is located on the valve disc.

In case of a leak remove the exhalation valve disc and replace it with a new one as follows:

Removing the Spring Retainer and Exhalation Valve



Pull one side of the spring retainer fork off of the locking lug and out of the slot until the spring retainer releases.

- Inspect the spring retainer and spring. Discard if the spring is deformed, the retainer forks are broken, or if the retainer is otherwise damaged.
- Remove the exhalation valve. Discard if the valve is torn, tacky, or otherwise damaged.

NOTE: Be careful not to damage the valve seat. If it is damaged, replace the component housing.



Inspect the valve seat in the component housing. If any blemishes or damage is present, replace the component housing.

Installing the Spring Retainer and Exhalation Valve



6.4 Replacing the Speech Diaphragm

- (1) Unbutton the nose cup.
- (2) Unscrew the threaded socket from the mask inside with the special tool.
- (3) Remove the O-ring and the speech diaphragm.
- (4) Insert the new speech diaphragm:
 - a) Place the speech diaphragm into the component housing with the yellow side visible.
 - b) Reinsert the O-ring.
- (5) Screw in the threaded socket with the special tool (Torque: 5 Nm).
- (6) Perform a tightness test (\rightarrow chapter 6.5).

6.5 Tightness Test of the Mask



The testing of the masks for tightness is performed using an applicable MSA test device (i. e. SmartCHECK) in accordance with the relevant operating manual.

- (1) Fit mask tight onto the test device.
- (2) Test mask according to test device operating manual.

The mask including the exhalation valve meets the requirements if for a moistened exhalation valve and a vacuum of 10 mbar generated inside the mask the pressure change does not exceed 1 mbar in a minute.

Leaking masks must not be used.

Opening Pressure Test of the exhalation valve

The opening pressure of the exhalation valve has to be at least 4.2 mbar, otherwise the mask must not be used.

6.6 Visual Test and Function Test

Visual Test

- (1) Inspect the mask for possible damages like for example deformations, stickings or cracks. Valve discs, especially exhalation valve discs, are crucial functional elements of the mask.
- (2) Defective or damaged parts have to be replaced immediately.

Functional Test

After assembling the mask the mobile parts, especially the valve discs, have to be tested for unrestricted mobility.

- (1) Inspect the lens for cracks, scratches, and a tight seal with the mask rubber.
- (2) Ensure the exhalation valve is clean and operates easily. The valve must move off the seat and return when released.
- (3) Inspect the inlet valve for damage. Ensure the valve disc is in place.

7

Safekeeping and Storage

WARNING!

In order to avoid damage to or the deformation of the masks keep no additional loose objects in the mask container.

For the safekeeping of the mask the mask container should be used.

MSA rubber products are protected by an anti-aging agent that can become visible as a light coating. This coating is harmless and can be removed during cleaning.

To ensure a long life for rubber components, keep them in a cool, dry place that is protected from ultraviolet radiation, according to ISO 2230:2002, Rubber Products – Guidelines for Storage.

8 Ordering Information

8.1 Exploded View



Fig. 10 G1 Facepiece exploded view

1	Nosecup	14	Lightpipe assembly, left
2A	Harness, kevlar	15	Lightpipe assembly, right
2B	Harness, rubber	16	Screw 30x8
3	Buckle D-ring	17	Inlet valve
4	Buckle	18	Inlet valve seat
5	Neck strap, cloth	19	Button, head harness
6	Neck strap, rubber	20	Speech diaphragm
7A	Component housing Fixed Push-To-Connect	21	O-ring
7B	Component housing Push-To-Connect	22	Inlet valve assembly
7C	Component housing M45x3	23	Screw ring
8	Lens	24	Retainer, exhalation valve
9	Lens ring, upper	25	Exhalation valve assembly
10	Lens ring, lower	26	Retainer, inhalation valve
11A	Cover, component housing Fixed Push-To-Connect	27	Inhalation valve
11B	Cover, component housing Push-To-Connect	28	Spring, exhalation valve
11C	Cover, component housing M45x3	29	Pullstrap, head harness
12	Clamp, component housing	30	Adapter ESA
13	Screw, lens ring	31a/b	Gasket
		32	Sealing ring

8.2 Spare Parts and Accessories

Description	Article No.
Nosecup small	10149572-SP
Nosecup medium	10149573-SP
Nosecup large	10149574-SP
3S, ULTRA ELITE head harness, spare	D2055014-SP
Harness, 4 pt adjustable	10144215-SP
Buckle D-ring	10149551-SP
Buckle	10144217-SP
Neck strap, assembly, textile, G1 Facepiece	10144220-SP
Neck strap, assembly, rubber G1 Facepiece	10159699-SP
Lens, PC 3 mm, G1 facepiece	10168597-SP
Lens, APEC 4 mm, G1 facepiece	10144194-SP
Lens, PC-HC 3 mm, G1 facepiece	10176797-SP
Lens ring, upper	10144195-SP
Lens ring, lower	10144196-SP
Cover, component housing	10144187-SP
Screw, lens ring	10144221-SP
Lightpipe assembly, left	10144180-SP
Lightpipe assembly, right	10144204-SP
Screw, coated SS, 30x8, threadforming	10144233-SP
Inlet valve seat	10144192-SP
Inlet valve	10144193-SP
Button, head harness, black (medium)	10144219-SP
Button, head harness, gray (large)	10144235-SP
Button, head harness, green (small)	10144234-SP
Speaking diaphragm	10144209-SP
O-ring	10144232-SP
Inlet valve assembly	10144191-SP
Screw ring	10144213-SP
Retainer, exhalation valve	10144177-SP
Exhalation valve assembly	10144174-SP
Retainer, inhalation valve	10144208-SP
Inhalation valve	10144207-SP
Spring, exhalation valve	10193368-SP
Speaking diaphragm retaining tool	10169560

8.3 ATO Code

For this product, order numbers have been replaced by an ATO (Assemble To Order) code.

To order a mask according to EN136 PC with a medium sized faceblank, a medium nosecup, rubber head harness, rubber neck strap and Push-To-Connect connector piece, the ATO code would be **E-M/I-M-E-R-P**:

	Face	blank		Head	Neck	
Application	Size Faceb- lank	Faceblank Material	Nosecup	Harness	Strap	Regulator
			S - Small	4 - 4-point	0 - None	I - Fixed Push- To-Connect
E - Europe EN 136 PC	S/I - Small Hy	vcar	M - Medium	Adjustable	C - Cloth	P - Push to Connect
EN 130 PC			L - Large	E - Rubber	R - Rubber	M - M45 x 3
				EU with buckles		E - ESA ("M"+ ESA-Adapter)
			S - Small	4 - 4-point	0 - None	I - Fixed Push- To-Connect
C - Europe EN 136 PC	M/I - Medium	Hycar	M - Medium	Adjustable	C - Cloth	P - Push to Connect
EN 136 PC			L - Large	E - Rubber	R - Rubber	M - M45 x 3
				EU with buckles		E - ESA ("M"+ ESA-Adapter)
			S - Small	4 - 4-point	0 - None	I - Fixed Push- To-Connect
A - Europe EN 136	L/I - Large Hy	car	M - Medium	Adjustable	C - Cloth	P - Push to Connect
APEC			L - Large	E - Rubber	R - Rubber	M - M45 x 3
				EU with buckles		E - ESA ("M"+ ESA-Adapter)

	B - Size C - Material				
A - Application	Faceb	D - Nosecup	E - Head Harness	F - Neck Strap	G - Regulator
		S - Small	4 - 4 PT Adjustable	0- None	1 - Fixed Push-To-Connect
	2007 HT -000 - 1/ 3	M - Medium	E - Rubber EU with buckles	C - Cloth	P - Push to Connect
		L- Large		R - Rubber	M - M45 × 3
					E - ESA ("M"+ ESA-Adapter)
		S - Small	4 - 4 PT Adjustable	0- None	1 - Fixed Push-To-Connect
E - Europe EN136 PC	M/I - Martine Hvrar	M - Medium	E - Rubber EU with buckles	C - Cloth	P - Push to Connect
(Standard lens "P")		L- Large		R - Rubber	M - M45 x 3
					E - ESA ("M"+ ESA-Adapter)
		S - Small	4 - 4 PT Adjustable	0- None	1 - Fixed Push-To-Connect
	1/1 accord throad	M - Medium	E - Rubber EU with buckles	C - Cloth	P - Push to Connect
	L/I - Large Mycar	L- Large		R - Rubber	M - M45 x 3
					E - ESA ("M"+ ESA-Adapter)
		S - Small	4 - 4 PT Adjustable	0- None	1 - Fixed Push-To-Connect
		M - Medium	E - Rubber EU with buckles	C - Cloth	P - Push to Connect
		L- Large		R - Rubber	M - M45 x 3
					E - ESA ("M"+ ESA-Adapter)
C Furan FN12C DC		S - Small	4 - 4 PT Adjustable	0- None	1 - Fixed Push-To-Connect
		M - Medium	E - Rubber EU with buckles	C - Cloth	P - Push to Connect
		L- Large		R - Rubber	M - M45 x 3
					E - ESA ("M"+ ESA-Adapter)
		S - Small	4 - 4 PT Adjustable	0- None	1 - Fixed Push-To-Connect
		M - Medium	E - Rubber EU with buckles	C - Cloth	P - Push to Connect
	r/i -raige ⊓ycai	L- Large		R - Rubber	M - M45 x 3
					E - ESA ("M"+ ESA-Adapter)
		S - Small	4 - 4 PT Adjustable	0- None	1 - Fixed Push-To-Connect
	s/l - Small Hyrrar	M - Medium	E - Rubber EU with buckles	C - Cloth	P - Push to Connect
		L- Large		R - Rubber	M - M45 x 3
					E - ESA ("M"+ ESA-Adapter)
		S - Small	4 - 4 PT Adjustable	0- None	1 - Fixed Push-To-Connect
A - Europe EN 136 APEC	M/I - Mardine Hyrar	M - Medium	E - Rubber EU with buckles	C - Cloth	P - Push to Connect
(Anti-fog lens "A")		L- Large		R - Rubber	M - M45 x 3
					E - ESA ("M"+ ESA-Adapter)
		S - Small	4 - 4 PT Adjustable	0- None	1 - Fixed Push-To-Connect
	/ - arge Hycar	M - Medium	E - Rubber EU with buckles	C - Cloth	P - Push to Connect
		L- Large		R - Rubber	M - M45 x 3
					E - ESA ("M"+ ESA-Adapter)

The following table shows all possible configurations that can be ordered for the G1 Facepiece



For local MSA contacts, please visit us at **MSAsafety.com**

Because every life has a purpose...